

# DOMINATOR® COOLANT BOOST REDUCES ENGINE WARM-UP TIMES IN COLD WEATHER

AMSOIL Dominator® Coolant Boost is designed to reduce corrosion and significantly enhance heat transfer in cooling systems. One of the overlooked benefits of better heat transfer is much quicker engine warm-up in winter conditions, which is noticed when the vehicle's defroster works much sooner.

To understand how Dominator Coolant Boost reduces engine warm-up times in cold weather, it is imperative to understand the fundamentals of an engine's cooling system and how Coolant Boost's proprietary tiered-surfactant technology works. The same tiered-surfactant technology that aids in reducing engine operating temperatures also decreases engine warm-up times.

In a vehicle's cooling system, the ultimate goal is to quickly and effectively move heat away from engine components, permitting the engine to run at a safe, controlled temperature. An effective cooling system reduces stress on all aspects of the engine, including the lubricating oil. Alternatively, a corroded cooling system that transfers heat ineffectively will eventually lead to engine overheating, breakdown of engine oil and catastrophic failure.

Before studying tiered surfactants, it is important to understand what a surfactant does in a cooling system. A surfactant reduces the surface tension of water and antifreeze, allowing closer contact with metal parts. This closer contact increases the coolant's efficiency in transferring heat away from

hot engine parts and out through the radiator and fan.

Many leading coolant additives contain only one surfactant, limiting their temperature ranges and ultimate effectiveness. AMSOIL Dominator Coolant Boost uses three surfactants, each designed to operate in a different temperature range to increase liquid-to-metal contact from the time the vehicle starts to the time it reaches operating temperature.

Graphic A illustrates how each surfactant in Coolant Boost's tiered-surfactant technology is designed to provide optimal performance over a wide temperature range, while competing products with only one surfactant

are limited to performance in a single temperature range.

Graphic B outlines controlled testing of AMSOIL Dominator Coolant Boost with a 50/50 antifreeze/water mix. When a cooling system reaches 120°F, the operator typically feels warm air coming out of the defroster. The time it takes to reach this temperature with Coolant Boost is reduced by 45 percent compared to the 50/50 antifreeze/water mix alone.

Through the use of tiered surfactants, AMSOIL Dominator Coolant Boost delivers quicker warm-up times in the winter and reduced engine temperatures in the summer, making it an excellent choice for year-round use. ■



Graphic A



Graphic B

	COOLANT ONLY	COOLANT W/ COOLANT BOOST	IMPROVEMENT
30° to 120°F	6 minutes, 30 seconds	3 minutes, 36 seconds	45% faster
30° to 180°F	10 minutes, 48 seconds	6 minutes, 54 seconds	35% faster